

REMARKS

Reconsideration and allowance of the claims are requested in view of the above amendments and the following remarks. Claims 1, 13, 21 and 32 have been amended. Support for the claim amendments may be found in the specification and claims as originally filed. For example, support for the claim amendments may be found in the present specification at least at page 3, lines 11-12; page 5, line 21 – page 6, line 2; and page 7, lines 16-17. No new matter has been added.

Upon entry of this amendment, claims 1-41 are pending, with claims 1, 13, 21 and 32 being independent.

1. Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1, 13, 20-21 and 32 under 35 U.S.C. §102(b) as being anticipated by Carey et al. (2001/0049685). Applicants respectfully traverse this rejection for at least the following reasons.

Carey et al. discloses query optimization with deferred updates and autonomous sources (see abstract). Carey et al. teaches a query optimization technique (DECAF) for an object query system with an object cache supporting deferred updates to underlying databases. The DECAF optimization allows updates to the databases while data in the object cache is being modified (i.e., updates performed by transactions other than the transaction using the object cache at a given time). For data integrity, query results that are returned to a client application must include committed updates made by other transactions. Query results must also be consistent with any deferred updates that exist only in the object cache (see paragraph 96).

Carey et al. further discloses that the DECAF optimization is organized into three steps. In the first step, the DECAF optimization rewrites queries so that in-cache deferred updates are taken into consideration in determining a query's result. In the second step, the DECAF optimization detects objects that have been deleted in the database or no longer qualify for a query's result due to a database update, but were preserved in the cache beyond some transaction

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boundary. The second step is only used in environments in which the object cache is maintained past transaction boundaries (i.e., where the contents of the object cache are preserved after the application using the object cache commits). Additionally, in the second step, the DECAF optimization transforms the query having an object view into a query that the RDBMS will understand. In the third step, the DECAF optimization translates the pushdown queries into SQL against the underlying tables and rewrites groups of two or more SQL queries destined for the same source table into a single query (see paragraph 97).

However, Carey et al. fails to teach or suggest user specified currency or consistency constraints associated with the query. As discussed in the present specification:

A user can explicitly specify certain currency and consistency requirements on a database query and the system provided ensures that the requirements are met. (see page 3, lines 11-12; emphasis added).

To express currency and consistency constraints, it is assumed that a currency clause is added to SQL queries. (see page 7, lines 16-17; emphasis added).

Additionally, the advantages of having the ability to specify currency and consistency requirements as part of a query are discussed at least on page 6 of the present specification.

Therefore, Carey et al. fails to teach or suggest at least the elements of interpreting and converting a user specified currency constraint into a form usable by a query optimizer, as included in independent claim 1 as amended. Independent claims 13, 21 and 32 have been amended to include similar elements.

Therefore, since Carey et al. does not teach, or even suggest, each and every element of independent claims 1, 13, 21 and 32, these claims are allowable. Claim 20 incorporates the elements of independent claim 13. Therefore, claim 20 is also allowable.

For at least the above reasons, reconsideration and withdrawal of the rejection of claims 1, 13, 20-21 and 32 under 35 U.S.C. §102(b) are respectfully requested.

2. Allowable Subject Matter

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The Office Action objects to claims 2-12, 14-19, 22-31 and 33-41 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-12 depend from claim 1. Claims 14-19 depend from claim 13. Claims 22-31 depend from claim 21. Claims 33-41 depend from claim 32. As discussed above, independent claims 1, 13, 21 and 32 are allowable. For at least this reason, and the additional features recited therein, claims 2-12, 14-19, 22-31 and 33-41 are also allowable.

For at least the above reasons, reconsideration and withdrawal of the objection to claims 2-12, 14-19, 22-31 and 33-41 are respectfully requested.

3. Conclusion

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the present application is requested. Based on the foregoing, applicants respectfully request that the pending claims be allowed, and that a timely Notice of Allowance be issued in this case. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the applicants' attorney at the telephone number listed below.

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If this response is not considered timely filed and if a request for an extension of time is otherwise absent, applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check please charge any deficiency to Deposit Account No. 50-0463.

Respectfully submitted,
Microsoft Corporation

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February 22, 2008
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/Noemi Tovar/
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